Amendments to the Claims

Listing of Claims:

1. (Previously Presented) An isolated recombinant *Piscirickettsia salmonis* 45 Kda (^{Ps}p45) polypeptide comprising the amino acid sequence of SEQ ID NO: 2 or SEQ ID NO: 4.

Claims 2-3 (Canceled)

4. (Previously Presented) The isolated recombinant polypeptide of claim 1 that is a chimeric protein.

5. (Cancelled)

6. (Previously Presented) An isolated or recombinant nucleic acid encoding a ^{Ps}p45 recombinant polypeptide comprising the amino acid sequence of SEQ ID NO: 2 or SEQ ID NO: 4.

7. (Previously Presented) An isolated or recombinant nucleic acid comprising the nucleotide sequence of SEQ ID NO: 1 or SEQ ID NO: 3.

8. (Cancelled)

9. (Previously Presented) An expression vector, comprising the nucleic acid of claim 7, and a transcriptional control sequence, wherein the nucleic acid is operatively linked to the transcriptional control sequence.

10. (Previously Presented) A host cell that comprises the expression vector of claim 9.

11. (Previously Presented) A method for producing a ^{Ps}p45 recombinant polypeptide comprising culturing the host cell of claim 10 in a culture medium, wherein the host cell expresses the nucleic acid encoding the recombinant ^{Ps}p45 polypeptide; and whereby the

recombinant ^{Ps}p45 polypeptide is produced.

12. (Previously Presented) The method of claim 11 wherein the host cell is an *E. coli* cell.

13. (Previously Presented) A method of obtaining an isolated recombinant ^{Ps}p45 polypeptide comprising purifying the recombinant polypeptide produced by the method of claim 12 from the culture medium.

14. (Previously Presented) The isolated recombinant ^{Ps}p45 polypeptide obtained by the method of claim 13.

15. (Previously Presented) A recombinant *Yersinia ruckeri* cell comprising the expression vector of claim 9.

16. (Previously Presented) The recombinant *Yersinia ruckeri* cell of claim 15 that has the BCCM accession No. of LMG P-22044.

17. (Cancelled)

18. (Previously Presented) An immunogenic composition that comprises the isolated recombinant ^{Ps}p45 polypeptide of claim 1.

19. (Previously Presented) An immunogenic composition that comprises the expression vector of claim 61.

20. (Previously Presented) An immunogenic composition comprising the recombinant *Yersinia ruckeri* cell of claim 15.

21. (Previously Presented) The immunogenic composition of claim 20, wherein said recombinant *Yersinia ruckeri* cell is a bacterin.

22. (Previously Presented) An immunogenic composition comprising the recombinant *Yersinia ruckeri* cell of claim 16.

23. (Previously Presented) The immunogenic composition of claim 22, wherein said recombinant *Yersinia ruckeri* cell is a bacterin.

Claims 24-48 (Canceled)

49. (Previously Presented) An immunogenic composition that comprises the expression vector of claim 9.

Claims 50-60 (Canceled)

61. (Previously Presented) An expression vector, comprising the nucleic acid of claim 6, and a transcriptional control sequence, wherein the nucleic acid is operatively linked to the transcriptional control sequence.

62. (Previously Presented) A host cell that comprises the expression vector of claim 61.

63. (Previously Presented) The host cell of claim 62 wherein the host cell is an *E. coli* cell.

64. (Previously Presented) The immunogenic composition of claim 18 further comprising an antigen obtained from an Infectious Pancreatic Necrosis (IPN) virus, wherein the antigen obtained from the IPN virus is selected from the group consisting of a VP2 var protein, aVP3 protein, and a combination thereof.

65. (Previously Presented) The immunogenic composition of claim 19 further comprising an antigen obtained from an Infectious Pancreatic Necrosis (IPN) virus, wherein the antigen obtained from the IPN virus is selected from the group consisting of a VP2 var protein, aVP3 protein, and a combination thereof.

66. (Cancelled)

67. (Previously Presented) The immunogenic composition of claim 64 wherein the VP2 var protein is obtained from a transformed *Pichia pastoris* cell, BCCM Accession No. IHEM 20069 and the VP3 protein is obtained from a transformed *Pichia pastoris* cell, BCCM Accession No. IHEM 20071.

68. (Previously Presented) The immunogenic composition of claim 65 wherein the VP2 var protein is obtained from a transformed *Pichia pastoris* cell, BCCM Accession No. IHEM 20069 and the VP3 protein is obtained from a transformed *Pichia pastoris* cell, BCCM Accession No. IHEM 20071.

69. (Cancelled)

70. (Previously Presented) The immunogenic composition of claim 64 wherein the VP2 var protein is obtained from a transformed *Pichia pastoris* cell, BCCM Accession No. IHEM 20070 and the VP3 protein is obtained from a transformed *Pichia pastoris* cell, BCCM Accession No. IHEM 20072.

71. (Previously Presented) The immunogenic composition of claim 65 wherein the VP2 var protein is obtained from a transformed *Pichia pastoris* cell, BCCM Accession No. IHEM 20070 and the VP3 protein is obtained from a transformed *Pichia pastoris* cell, BCCM Accession No. IHEM 20072.

72. (Cancelled)

73. (Previously Presented) A method of protecting a salmonid fish from salmonid rickettsial septicemia comprising administering to the fish the immunogenic composition of claim 18.

74. (Previously Presented) A method of protecting a salmonid fish from salmonid rickettsial septicemia comprising administering to the fish the immunogenic composition of claim 19.

75. (Previously Presented) A method of protecting a salmonid fish from salmonid rickettsial septicemia comprising administering to the fish the immunogenic composition of claim 49.

76. (Previously Presented) The immunogenic composition of claim 64 that further comprises an antigen obtained from *Aeromonas salmonicida*.

77. (Previously Presented) The immunogenic composition of claim 65 that further comprises an antigen obtained from *Aeromonas salmonicida*.

78. (Cancelled)

79. (Previously Presented) An isolated recombinant polypeptide that comprises at least 95% of the amino acid sequence of SEQ ID NO: 2 or SEQ ID NO: 4.

80. (Cancelled)

81. (Previously Presented) An isolated recombinant polypeptide comprising the amino acid sequence of SEQ ID NO: 2 or SEQ ID NO: 4 with ~~at least one~~ a conservative amino acid substitution.

82. (Previously Presented) The isolated recombinant polypeptide of claim 81 wherein the ~~at least one~~ conservative amino acid substitution is selected from the group consisting of:

(1) a substitution of Lys for Arg;
(2) a substitution of Arg for Lys;
(3) a substitution of Glu for Asp;
(4) a substitution of Asp for Glu;
(5) a substitution of Ser for Thr;
(6) a substitution of Thr for Ser;
(7) a substitution of Gln for Asn;
(8) a substitution of Asn for Gln;

(9) a substitution of Ile for Leu

(10) a substitution of Ile for Val;

(11) a substitution of Leu for Ile; and

(12) a substitution of Leu for Val.